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Letter dated 12 July 1990 from the Permanent Representative of Guyana to the United Nations addressed to the Secretary-General

Further to my letter of 12 June 1990 (A/45/313), under cover of which I forwarded to you a press release on the Programme of Sustainable Tropical Forestry undertaken by the Government of Guyana and the Commonwealth Secretariat, I have the honour now to transmit for your information a copy of the report on this project (see annex).

My Government believes that this document will be of interest to all members and observer States of the United Nations.

I have accordingly been instructed to request that it be circulated as an official document of the General Assembly under item 83 of the preliminary list.

(Signed) S. R. INSANALLY
Ambassador
Permanent Representative

* A/45/50.

best copy available

ANNEX

COMMONWEALTH - GOVERNMENT OF GUYANA

PROGRAMME FOR SUSTAINABLE TROPICAL FORESTRY

Report of a Commonwealth Group of Experts

M.S. SWAMINATHAN
Chairman

G.S. NAGLE

S. APPANAH

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PROMILA KAPOOR
Secretary

(Prepared in co-operation with
the Inter-Agency Committee of
the Government of Guyana)

/...

MESSAGE FROM HIS EXCELLENCY HUGH DESMOND HOYTE, S.C.
PRESIDENT OF THE CO-OPERATIVE REPUBLIC OF GUYANA

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My country, Guyana, is blessed with natural and cultural diversity. It possesses about 18 million hectares of tropical rain forests, representing about 90 per cent of the commercial forests of the Commonwealth countries in the Caribbean region. Our genetic estate is rich both in species and in the variety of ecosystems. We also enjoy a cultural heritage which is most impressive in the wealth of its heterogeneity, ranging from that of our indigenous peoples, the Amerindians, to that of more recent arrivals from Europe, Africa and Asia.

The ecological prudence of our early inhabitants, the Amerindians, is captured in the following legend: ***"The sky is held up by trees. If the forest disappears, the sky which is the roof of the world collapses. Nature and man then perish together".***

It is to demonstrate how nature and man, instead of perishing together, can prosper together, that I made a proposal to the Commonwealth Heads of Government at their Meeting last October at Kuala Lumpur, Malaysia. This proposal was to set aside part of Guyana's forests for a project, under Commonwealth auspices, for developing and demonstrating methods of sustainable management of tropical rain forests and of conserving biological diversity.

I was extremely happy when the Commonwealth Heads accepted my offer, and mandated Sir Shridath Ramphal, Commonwealth Secretary General to take the necessary action to convert it into an implementable project. Sir Shridath, with his usual energy and enthusiasm, was quick off the mark and soon assembled a Commonwealth Expert Group of distinguished scientists to prepare the project.

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The Expert Group, headed by Dr M. S. Swaminathan, and a Government of Guyana Inter-Agency Team, headed by Mr W. M. King, have worked assiduously together to prepare a project of which we can all be proud. This project will be Guyana's and the Commonwealth's gift to future generations, who will benefit from the know-how developed under it for achieving accelerated economic development, based on sound ecological ground rules. I thank and compliment them on a job well done.

However, the successful implementation of the project will depend on the availability of the necessary financial and technical support. In this connection, I am optimistic that these will become available so that we can move rapidly to convert the concept into reality.

On behalf of the Government and People of Guyana, I pledge our total support for the speedy and effective implementation of this Commonwealth-Government of Guyana Programme for Sustainable Tropical Forestry.

Hugh Desmond Hoyte
President

Office of the President
Georgetown, Guyana.
22nd May, 1990.

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FOREWORD BY THE COMMONWEALTH SECRETARY-GENERAL

The Commonwealth has been playing its part in promoting awareness and action in response to the grave threats to our planet posed by the disastrous consequences of environmental neglect. At Kuala Lumpur in October 1989, Commonwealth Heads of Government, in the Langkawi Declaration, set out a programme for Commonwealth action. A Commonwealth Expert Group Report entitled, "Climate Change: Meeting the Challenge", which was considered by the Kuala Lumpur meeting remains a major contribution to our understanding of the agonising problem of the greenhouse effect.

But at Kuala Lumpur it was the leader of a small country, President Hoyte of Guyana, who gave the Commonwealth programme a vigorous practical start by his magnanimous and imaginative offer to set aside a part of Guyana's Amazonian forest for use, under Commonwealth auspices, to demonstrate methods of sustainable management of tropical forests and in conserving biological diversity for the benefit of the whole international community.

The depletion of forests around the world is having disturbing local consequences for water and soil conservation, and for micro-climates. But this depletion also brings to the fore the oneness of our planet in its implications for the impairment of the capacity of forests to counteract the greenhouse effect by reducing carbon-dioxide levels and to preserve biological diversity.

With the great historical destruction that has taken place in temperate forests, attention is now focused crucially on tropical forests and particularly on that great world biological treasure-house - the Amazonian forests.

Guyana's forest resources have been only lightly exploited and its forest eco-systems are essentially intact. It is one of only 13 countries in the world where the bulk of tropical forests is still conserved. Guyana's offer is therefore no mere political gesture to placate a concerned world community. It is generously offering 900,000 acres for this project - a significant area in terms of the size of the country and the extent of its virgin forests. And it is an area with the greatest abundance of biological resources.

As Commonwealth Secretary-General and a Guyanese, and in relation to my special interest and the role I have been privileged to play in environmental matters, I am truly proud of Guyana's offer and of the responsibility entrusted by its Government to the Commonwealth in this project. I am happy to have been able to assemble a distinguished multi-disciplinary Commonwealth Expert Group under the eminent leadership of Dr Swaminathan to carry out its first phase.

The Report of the Group comes at a time when the international commurity is desperately searching for ways of restoring global ecological balance. It includes important recommendations which would be of great interest to the international community. They are concerned with ensuring conservation directly, and indirectly through sustainable economic exploitation, including use for recreation and eductional purposes.

The Guyanese government has given an opportunity to the world community to join with it in a global partnership in an endeavour that is of universal interest and requires international action. It is now for the international community to respond with tangible support. In view of its significance, the release of this Report on World Environment Day 1990 could not be more fitting.

Shridath S Ramphal

May 1990

Georgetown
Guyana

19 May 1990

Letter of Presentation

This report is the result of an invitation extended to us by the Commonwealth Secretary-General to explore the potential for organising under Commonwealth auspices a project in Guyana for the utilisation of tropical rainforests in an ecologically sustainable manner and for the conservation of species. Our terms of reference included:

1. Identification of an appropriate area of tropical rainforest to serve as a model for undertaking conservation and utilisation of tropical rainforests.

2. Preparation of resource inventories.

3. Assessment of relevant support systems required to implement this proposal.

4. Mobilisation of international resources (human, financial, scientific and technological) for various components of this project.

Our work was organised in two phases.

Phase I — Preparation of a detailed description of the site selected for the project, including resource inventories, by a team of Guyanese experts and officials with the help of three Members of the Commonwealth Expert Group and a scientist from the World Conservation Monitoring Centre at Cambridge, UK.

Phase II — Finalisation of the site identified and description and preparation of the detailed project proposal in accordance with the terms of reference cited above.

Our draft report was discussed with the Members of the Inter-Agency Committee of the Government of Guyana chaired by Mr Winston M King, Executive Chairman of the Guyana National Resources Agency and the final report incorporates their valuable comments and suggestions. We are grateful to His Excellency the President, the Government and the professional community of Guyana for their warm welcome, enthusiastic support and constructive assistance which made our task both pleasant and productive.

We commend H.E. Hugh Desmond Hoyte, President of Guyana on his initiative and the Commonwealth Heads of State and Sir Shridath Ramphal, Commonwealth Secretary-General for their prompt responses. The ecological, economic and technological value of this project to Guyana is immense. Equally exciting and important is the vast extrapolation domain for the results of the work done under this project, transcending several hundred million hectares of tropical rainforests.

We are confident that this project, if implemented along the lines suggested by us, would help to initiate a new chapter in the ecological and economic history of Guyana and other countries endowed with tropical rainforests. The project also offers a unique opportunity for Commonwealth and international co-operation in an area of supreme relevance to the future of the quality of life on our planet. We are grateful for the opportunity provided to us for participating in this exciting exercise in Commonwealth co-operation.

Please accept, Secretary-General, the expression of our highest consideration.

M S Swaminathan
Chairman

Simmathiri Appanah
Member

Bal S Ramdial
Member

G S Nagle
Member

Conrad Gorinsky
Member

Promila Kapoor
Member Secretary

REPORT OF THE COMMONWEALTH GROUP OF EXPERTS

VOLUME I

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COMMONWEALTH - GOVERNMENT OF GUYANA

A PROGRAMME FOR SUSTAINABLE TROPICAL FORESTRY

I Significance of the Guyana Rain Forest Project

Life on our planet has been possible for millions of years because of four important services rendered by the biosphere:

a) climate and radiation regulation;
b) microbial transformations and decomposition; leading to organic recycling mechanism;
c) biological diversity; and
d) biological productivity.

All of these services are now under severe stress due to a variety of man-made causes. This is reflected in the increasing damage being done by unbalanced activities in the guise of economic development to the basic life support system comprising land, water, flora, fauna and the atmosphere.

The signs of an impending and general breakdown of the resource and environmental systems which support us are already here, unmistakable and visible for all to see. These include:

a) vanishing forests (with their flora and fauna);

b) loss of grazing lands and increasing degradation of land;

c) precipitous drying of drinking water sources;

d) intensifying droughts and floods;

e) deterioration of the quality of air and water;

f) growing signs of economic malaise due to conflicts with nature; and

g) accumulation of toxic and non-biodegradable wastes.

It is poor countries and within them, the poor and the marginalised who suffer most from such environmental breakdown.

Concerned with the threats to global ecological security, the United Nations set up in 1983, a World Commission on Environment and Development (WCED), chaired by Mrs. Gro Harlem Brundtland of Norway. The WCED report, entitled "Our Common Future" was presented to the UN General Assembly in October, 1987. Simultaneously, the United Nations Environment Programme (UNEP) presented an Environmental Perspective to the year 2000 and Beyond. Both of these reports paint a frightening picture of the rapid depletion of the world's resources, coupled with rising social and economic problems. They reflect the widespread frustration about the inability of current approaches to solve the inter-linked problems of environment degradation and economic development and call for major changes in the way people relate to the latter.

Developing countries, including Guyana, are faced with the need for accelerating economic growth in such a manner that the poor become the main beneficiaries of such growth. On the other hand, it is clear that we should avoid proceeding along paths with environmental costs so high that these activities cannot be sustained. Thus, the new paradigm of development should promote developmental activities and life styles based on the concept of Man in nature rather than Man in confrontation with nature.

Concerned with such issues, the Commonwealth Heads of Government, at their meeting held in Kuala Lumpur, Malaysia, from 18th to 24th October, 1989, adopted, in their Langkawi Declaration on Environment, a 16-point programme of action designed to promote development without environmental destruction. In particular, they agreed, and urged the global community to:

> "Strengthen efforts by developing countries in sustainable forest management and their manufacture and export of higher value-added forest products ..."
>
> "Support activities related to the conservation of biological diversity and genetic resources, including the conservation of significant areas of virgin forest and other protected natural habitats."
>
> "Support low-lying and island countries in their efforts to protect themselves and their vulnerable natural marine ecosystems from the effects of sea level rise."

The President of Guyana, His Excellency Hugh Desmond Hoyte, responded to the challenge by offering to set aside a part of Guyana's Amazonian Tropical forest for a pilot project, under Commonwealth auspices, "to study utilisation of the forest on a sustainable basis, and the conservation of species."

"Heads of Government noted with appreciation the generous offer from the President of Guyana to set aside part of Guyana's tropical forest for a pilot project under Commonwealth auspices to study utilisation of the forest on a sustainable basis and the conservation of species. They asked the Secretary-General to organise a high level exploratory mission to pursue the offer with the Guyanese authorities."

The twin tasks set by His Excellency the President of Guyana, namely sustainable utilisation of tropical rain forests and the conservation of biological diversity are of critical importance for the protection of the four basic biosphere services referred to earlier, namely, climate and radiation regulation, microbial transformation, biological diversity and biological productivity. Thus, this project will be the greatest gift to the future by the Government and people of Guyana and the Commonwealth.

II The Timeliness of the Project and its Significance to Guyana

In a time of extraordinary change in the relationship between people and the biological resources upon which their welfare depends, this Project is an island of hope in the midst of a sea of despair. We now know that maintaining maximum biological diversity assumes urgency as rates of environmental change increases. Diversity in genes, species, and ecosystems provide the raw material with which we can adapt to change. The loss of each gene, species and ecosystem limits the options for the future. While there is still much discussion on strategies for sustainable development, this project moves from strategy to action.

Concerned with global environmental degradation, the United Nations is convening an International Conference on Environment and Development in Brazil in June, 1992. This project will help to clarify issues, indicate priorities for action and show how the Amazonian rain forests can be managed in a sustainable manner and has the potential of providing a significant input to the 1992 conference.

The Commonwealth is rich both in tropical rain forest resources and forestry research and training capability. This

joint project of the Government of Guyana and the Commonwealth Secretariat is therefore launching the decade of the nineties, often described as a critical decade in our ecological history, on a path of hope and promise for the present and future generations.

The scientific and economic significance of this project to the people of Guyana is immense. At present Guyana has about 3.6 million hectares of accessible exploitable forest. The National Forestry Action Plan has estimated that another 10.4 million hectares of exploitable but currently inaccessible forest exists. With the construction of roads over time, these areas will become accessible. The know-how and technology developed under this project will be of immense help in ensuring that the untapped forest potential, when utilised, is managed in an ecologically sustainable and socially desirable manner. Further, this project through its symbiotic links with research and educational institutions within Guyana and outside it would help in the development of the necessary technical personnel for undertaking the sustainable management of Guyana's rich forest wealth.

III The Project

The project aims to establish in Guyana a Commonwealth Programme for Sustainable Tropical Forestry. The Programme will consist of the following four activities:

a) Establish and maintain a Wilderness Preserve in the Project Site area, in order to maintain an earmarked segment of the forest in its pristine purity. This will enable continued natural evolution of biological diversity and provide opportunities for scientists and scholars from all over the world to study nature in action and to

unravel the richness of the evolutionary mechanisms in a tropical rain forest, with reference to both macro- and micro-flora and fauna.

b) Maintain and manage a part of the Project Site for yielding economic benefits to the people of Guyana in the form of forest products, mining, medicinal and industrial raw material and eco-tourism. The management principles of ecological sustainability and environmental accounting will be integrated with those of economic viability and social and cultural sustainability.

c) Organise an International Centre for Research, Training and Communication on the sustainable management of Tropical Rain Forests. Here Scientists and scholars from Guyana, other Commonwealth countries and other countries of the world can conduct research and undergo practical training in various aspects of sustainable tropical forest management and utilisation.

d) Promote environmental literacy through formal and non-formal means, particularly on the symbiotic linkages between forests and quality of life on earth and establish for this purpose a Media Resources Centre and software for environmental communication.

IV Procedures adopted for preparing the Project

Soon after the visionary offer of a part of Guyana's Amazonian tropical forest for a pilot project in October, 1989, at Kuala Lumpur by His Excellency the President of Guyana, the Government of Guyana set up an Inter-Agency Committee under the

Chairmanship and Co-ordination of Mr. Winston M. King, Executive Chairman of the Guyana Natural Resources Agency (GNRA). The composition of this Inter-Agency Committee is given in Appendix I. The Inter-Agency Committee constituted a Guyanese Counterpart Technical Team to attend to the technical details of the present Project. Composition of this team is given in Appendix II.

In February 1990 the Commonwealth Secretary General in accordance with the decisions of the Commonwealth Heads of Government "to pursue the offer with the Guyana authorities" established a high level exploratory mission under the Chairmanship of Dr. M. S. Swaminathan of India. The composition of the Commonwealth Expert Group is given in Appendix III. This Expert Group organised its work in two phases.

Phase I: An advance party of experts and the Member-Secretary visited Guyana from 23rd April to 1st May, 1990, and worked with the Guyanese Counterpart Technical Team in preparing a detailed Site Description Report. The composition of the advance party is given in Appendix IV. Based on this interaction a detailed description of the Project Site, covering an area of about 900,000 acres (about 360,000 hectares), was prepared. This site description is given in Volume II.

Phase II: The Commonwealth Expert Group visited Guyana from May 12th to 22nd, 1990, finalised the Site Description Report with the Guyanese Counterpart Technical Team, and prepared the Project Proposal given in this report.

The recommendations contained in this report are based on the excellent Site Description Report done by the Guyanese Inter-Agency Committee, assisted by the Counterpart Technical Team and the advance party of the Commonwealth Expert Group.

This report forms the main basis for the recommendations of the Commonwealth Expert Group. The Commonwealth Expert Group also had the benefit of studying the National Forestry Action Plan (1990-2000) prepared under the co-ordination of the Guyana Natural Resources Agency through the Guyana Forestry Commission and the Canadian International Development Agency in 1989. This excellent document provided valuable inputs and insights for the work of the Commonwealth Expert Group. Finally, the Commonwealth Expert Group had the privilege of receiving detailed guidance from His Excellency the President of Guyana, the originator of this Project. Record of the meeting at which this project was discussed with him is given in Volume II.

The Commonwealth Expert Group visited the Project Site and also held detailed discussions with Government officials, representatives of U.N. Agencies, the Inter-American Development Bank, High Commissions of Commonwealth Countries, University Professors, industrial experts and representatives of Non-Governmental Organisations. The list of persons met is given in Volume II. Based on the reports mentioned above, visits and discussions recommendations have been made for consideration by His Excellency the President of Guyana and the Commonwealth Secretary-General.

In addition to recommendations on the development of the Project, suggestions are given on the follow-up action required and on methods for implementing this programme. When implemented, the Commonwealth Secretariat-Government of Guyana Programme for Sustainable Tropical Forestry in Guyana will be the largest ecological research and development project carried out in one of the richest centres of biological diversity in our planet.

V Distinctive Features of the Project Site

The Project Site offered by the Government of Guyana covers an area of about 900,000 acres (360,000 hectares or 1400

square miles) and is unique in the following respects:

... It contains a magnificent diversity of tropical flora and fauna.

... It is accessible.

... Human activity in the project area is absent.

... A large section of forest area will be kept in its pristine purity.

... It offers opportunities for implementing the four goals of the project, namely establishment of a Wilderness Preserve, promotion of Sustainable Utilisation, organisation of Research and Training activities, and Environmental Literacy Programmes.

VI Details of the proposed Commonwealth Programme for Sustainable Tropical Forestry (CPSTF)

As mentioned earlier, CPSTF will focus on four areas given earlier. A brief description of each of these and suggestions for their further refinement are given below:

A. Amazonian Rain Forest Wilderness Preserve

The full range of ecological processes and the species diversity of tropical forests can only be maintained if large undisturbed areas are established in perpetuity for conservation. Yet only three percent of the world's remaining tropical forest is legally protected. It is essential that some areas are maintained in their pristine purity to serve as nature's evolutionary laboratories where evolutionary mechanisms continue to work uninterrupted. Also, such wilderness preserves would offer opportunities for a wide range of studies, such as:

- demography and biogeography of species,

- genetic diversity in soil micro-flora and fauna,

- interactions among species,

- role of biodiversity on ecosystem functioning,

- sources and sinks for water, minerals and gases,

- basis of biological productivity, and

- evolution of species.

In addition, such areas will become veritable mines of valuable genes that will help in adapting to new environmental and technological challenges. Recombinant-DNA techniques have opened new opportunities for combining characteristics found in wild and cultivated species and have thus greatly enhanced the potential economic value of Guyana's rich Genetic Estate. Maintaining a part of this Genetic Estate in its pristine purity would therefore also make much economic sense.

B. Sustainable Utilisation of Tropical Rain Forests

The key to sustainable management is to ensure that the biological "capital" produces significant "interest" in the form of economic benefits to the people, and to harvest that interest without eating into, or damaging, the capital itself. In other words, today's progress in forest exploitation should not be at the expense of tomorrow's prospects for obtaining similar

benefits. The economic benefits from tropical forests flow not only from timber and tree based products, but also from opportunities for mining, tourism, pharmaceutical industry and other such economic enterprises. In this context, the Commonwealth Expert Group fully endorses the thrusts and priorities indicated in the National Forestry Action Plan (1990-2000) of Guyana.

Because of large information gaps and the susceptibility of tropical rain forest to succumb to rapid degradation caused by uncontrolled harvesting, it will be prudent not to begin forest exploitation which the Project Area until basic data has been collected and appropriate mechanisms and ground rules have been put in place to ensure sustainable utilisation.

An assessment of expected economic demands on the project area is given in Volume II.

C. Establishment of an International Centre for Research and Training for the Sustainable Management of Tropical Rain Forests

This Centre will be the scientific and intellectual power house of the Commonwealth Programme for Sustainable Tropical Forestry. Already under the National Forestry Action Plan (1990-2000), the need for establishing an International Centre for Applied Research on Tropical Forest Ecosystem has been stressed. The present proposal and the NFAP Project (No. 23) can be integrated. The research and training activities will be organised in the form of a mutually reinforcing set of core and co-operative programmes.

D. Establishment of a Communication Centre

An environmental literacy programme would be developed. This will have a computer-based information system which will include an environmental data base.

VII Modality for Implementation

Work on the components a, b and d can be effectively undertaken only after establishing an appropriate mechanism. The expert group recomends that this mechanism be established by means of the International Centre given in 'C' above. In view of the cardinal role this centre is to play the expert group considered in greater detail specific programmes that will be undertaken at the centre. These are as follows:

Core Programmes

The Centre will have, to begin with, the following five major research and educational thrusts as its core activities.

Details of activities to be covered under the Core Porgramme are given in Volume II.

1. Programme Area 100: Sustainable Tropical Rain Forest Utilisation

This major programme area will have the following sub-programmes:

1.1 Sub-Programme Area 101: Ecological Mining

Gold and diamonds are being mined by small scale mining techniques in some locations along the North-Eastern

border of the Project Site. In addition potential for feldspar, dimension stone and potarite has been noted. In Guyana, as well as in other parts of the world, environmental problems associated with mining relate to factors such as the need for replanting and rehabilitation of the mined areas and the discharge of pollutants into waterways. Increasingly steps are being taken to minimise and even eliminate the environmental hazards associated with mining. It is now clear that by integrating certain basic ground rules, ecologically sound mining practices can be promoted. This will call for the science and art of ecological mining.

1.2 Sub-Programme Area 102: Ecological Economics

Cost-benefit accounting systems in enterprises based on the use of natural resources should reflect, as fully as possible, the importance of natural resources as depletable and renewable economic assets. Although natural systems provide demonstrably large economic benefits, their value is not reflected in standard economic accounts. Procedures of economic analysis based on ecological considerations are essential to ensure sustainability. The value of the land under these conditions will have to be quantified in order to withstand economic scrutiny, bearing in mind that the value of any organism in its natural state lies in the discovery of its inherent properties. Therefore, the Centre will undertake research on standardising methodologies for taking into account natural resource depletion in balance sheets of enterprises that draw upon the produce of the tropical forests.

1.3 Sub-Programme Area 103: Ecological Tourism

The challenge is to enhance the attraction of nature to tourists while avoiding the dangers of over use.

Environmental impact assessment methods will have to be standardised for tourism promotion projects. Visits of youth to the Project Area will have to be promoted through properly designed Ecodevelopment Camps.

1.4 Sub-Programme Area 104: Restoration Ecology

Vast tracts of tropical forests are currently degraded to various degrees, and some have been permanently lost as a result of bad and callous practices by man. Even whole biomes have gone extinct. It is now urgent to study the factors that led to such degradation, the ecological principles involved in the maintenance of the ecosystems, and ways and means to restore degraded forests.

1.5 Sub-Programme Area 105: Sustainable Intensification Methodologies

In order to derive maximum economic benefit from forests, it is essential that sustainable intensification methods which can yield a greater cubic volume of timber are standardised. These methods should involve detailed attention to soil health care and nutrient recycling. Microbiological aspects also need consideration.

1.6 Sub-Programme Area 106: Identification and Multiplication of Elite Trees

Many of the valuable commercial trees, like the Guyanese greenheart, grow very slowly. Nevertheless, within the population there is great variability in the growth rates and other physical properties.

Priority will be given to the identification of "plus trees" in commercially important species. Such material will be multiplied clonally through tissue culture and

micro propagation. Suitable nursery and planting practices will be developed. This will help to derive economic benefits from the genetic variability existing within a species.

1.7 Sub-Programme Area 107: Indicators of Sustainability

Measurement tools will have to be standardised for assessing the sustainability characteristics of alternative forestry and mining practices. Indices of sustainability and unsustainability can help to avoid over exploitation of forest resources.

1.8 Sub-Programme Area 108: Forest Products Utilisation

There are considerable opportunities for research on the preparation of value-added products from timber. Product commercialisation also needs attention. Such work is best carried out co-operatively with private and public sector enterprises. Industry and the International Research Centre can launch joint research and development projects on different aspects of forest products and minor forest product utilisation. Furthermore, the Centre can assist Guyana in the pursuit of commercial partners in areas where products may not yet be well defined, e.g. pharmaceuticals, wood-based chemicals etc. In addition the results will serve as a catalyst for industrial development. The prospects for a pulpmill using mixed fibres from existing hardwoods and plantations to be established on white sands will need to be studied.

1.9 Sub-Programme Area 109: Forest Policy and Trade

The Centre will have to develop local expertise and links to international programmes in this field and in areas of

public policy formulations and international trade relevant to making the commercial exploitation of tropical rain forest sustainable. Sustainable utilisation is very much influenced by economic and trade factors as well as by Government policies. Hence, expertise in this field will be important to develop sustainable forest management practices.

1.10 Sub-Programme Area 110: Climate and Water Balance

There is only limited knowledge of the relationships between tropical rain forests and the climate-water environment. Some of these include micro-climate requirements of different species, water inputs and outputs from river basis, leaching of soil, availability of water for domestic and agricultural use, catchment storage as a regulator of erosion and flood run-off, forest fires, seasonal flooding of lowland rain forest and sustainable changes of natural climate-water regime. The Centre will provide scientists with the opportunity to research the numerous fragile tropical rain forest climate-water-soil relationships.

2. Programme Area 200: Biodiversity and Biofuture

Biological resources provide the basis of life on earth. Such diversity holds a vast potential, both economic and medical, to be tapped by man. But hardly anything is known about all the species. Many remain undescribed. Biological resources are currently degraded and lost through large-scale clearing and burning of forest, over-harvesting of plants and animals, indiscriminate use of agro-chemicals, draining and filling of wetlands, destructive fishing practices, air, water and soil pollution, and the conversion of wildlands to agricultural and urban uses. Under this Programme,

scientists and scholars will study different aspects of in situ and ex situ and in vivo and in vitro conservation methods. Taxonomic studies will be undertaken to identify and classify new species.. Guyana has along the coast about 80,000 ha of mangrove forests. As pointed out in the National Forestry Action Plan, the mangroves are subject to exploitation by bark and fuelwood gatherers which is leading to erosion of the shoreline and loss of habitat of marine and shore wildlife and fish. Under the Biodiversity Programme, efforts will be made to conserve for posterity a representative sample of mangrove species and germplasm. This will be particularly important in the context of potential changes in sea levels. The Biodiversity Programme will be linked to a Biofuture Programme where candidate genetic characteristics will be identified for transfer to other species through recombinant-DNA techniques. Both ecological and economic key species will receive particular attention.

The area earmarked for conservation as a Wilderness preserve will be managed by the International Centre under its Biodiversity and Biofuture Programme.

2.1 Sub-Programme Area 201: Climate and Radiation Regulation

Being the largest terrestrial sink of carbon dioxide, the role of tropical rain forest as a climate and radiation regulator is assuming enormous importance due to global warming and rising sea levels, that are liable to affect countries in different ways. Little scientific investigation in areas such as the radiative balance and photosynthesis of different forest species, contribution of forest evapotranspiration to rainfall and carbon cycle of species in natural and sustainable forests have been done.

2.2 Sub-Programme Area 202: Genetic Resources

Under a Project developed by the Commonwealth Science Council (CSC) on Biological Diversity and Genetic Resources, studies are in progress in six biogeographical regions on:

a) Survey and authentication of locally used genetic resources,

b) Key species of life support value,

c) Training in techniques and methods related to study use and conservation of biological diversity and genetic resources: Herbarium development, taxonomy, traditional knowledge and conservation biology, micropropogation, tissue culture, documentation and data bases.

d) Medicinal and industrial plants.

Research and training in these areas will be undertaken by the Scientific Network of CSC.

2.3 Sub-Programme Area 203: Wildlife Management

Tropical forests are very rich in wildlife, but they are endangered, among other things, from overhunting and illegal trade. Current management of wildlife is on an ad hoc basis. In addition, very little is known about the various species of wildlife, their habits and the role they play in the plant community. Intensive research is needed in order to manage wildlife population on a sustainable basis. Additional knowledge of the animal-plant interactions are also required in order to understand the forest dynamics.

3. Programme Area 300: Ethno-biology and Human Ecology

Under this programme, activities such as deriving benefit from the ecological prudence of Amerindian families, stimulating greater women's participation in technology development and dissemination, agro-forestry practices with particular reference to silvi-pastoral and silvi-horticultural techniques and environmental health will be undertaken. The impact of the Mabura Hill - Lethem Road on human settlements will be studied. The Project Site is also a suitable site for developing basic methodology in rain forest archaeology. The traditional ecological prudence of the people who will need to be chronicled.

3.1 Sub-Programme Area 301: Annai Ethno-Biodata Base

The extant ethno-biological knowledge of the area should be recorded and converted to computer form. There is much local interest in co-operating, especially among the Annai villagers and the Women's Affairs Committee of the Regional Development Council. Other committees such as the Health and Education Committees would also participate. Based on initial development, etho-biodata base research projects can then be initiated.

4. Programme Area 400: Education and Training

Educational programmes will cover:

a) Non-degree courses,
b) Degree courses, and
c) Post doctoral programmes.

Priority attention will be given to short term non-degree courses for the training of local inhabitants in

community biodiversity conservation techniques and for women, in new methods of biomass utilisation and environmental health care. Degree programmes will be organised jointly with the University of Guyana and appropriate Universities in Commonwealth Countries and elsewhere.

5. Programme Area 500: Information and Communication

The major aim of this programme will be to promote the spread of Environmental Literacy at the public, professional and political levels. A Media Resources Centre will be established for providing software for communication.

The Environmental Literacy Programme can undertake collaborative work with the Commonwealth of Learning Centre in Canada and the Commonwealth Youth programme. Under this programme area, modules for measuring the sustainability of different extraction regimes can be developed and distributed to industry.

Co-operative Programmes

The Core and Co-operative Programmes will have to be developed in a mutually supportive manner. Appropriate funding mechanisms will have to be established for enabling co-operating institutions to participate actively in networks and joint research programmes. Scientific linkages will have to be established at the following five levels:

a) Collaboration with institutions in Guyana,
b) Collaboration with institutions in the Commonwealth,
c) Collaboration with institutions in the Amazon basin,

d) Collaboration with institutions in non-Commonwealth countries, and

e) Collaboration with private and public sector industry

1. Collaboration with Institutions in Guyana

The linkages which can be established within Guyana and which will help the Centre to move forward in its research and training programmes are listed below:

i) Ministry of Agriculture

... Fisheries
... Wildlife

ii) National Agricultural Research Institute (NARI)

... Agro-forestry including silvi-horticultural and silvi-pastoral systems of land management
... Soil Science
... Control of pests and diseases
... Ex situ conservation of genetic resources

iii) The Institute of Applied Science and Technology (IAST)

... Analytical Chemistry
... Natural Products Utilisation
... Informatics, Data Bases
... Biotechnology

iv) The University of Guyana (U.G.)

... Education and Training at the undergraduate levels

... Geography
... Biology
... Chemistry of Natural Products
... Forestry
... Marine Biology
... Biodiversity
... Information and Library Services
... Amerindian Studies

The University is initiating a programme of research on Biological Diversity jointly with the Smithsonian Institution of the United States of America, whose scientists are already participating in the "Flora of the Guyanas" Project. It will be useful to co-ordinate the work of the International Centre with this joint University of Guyana-Smithsonian Programme.

v) Guyana Agency for Health Sciences Education, Environment and Food Policy (GAHEF)

... Environmental Impact Assessment and Monitoring
... Environmental Health
... Environmental Literacy

vi) The Guyana Natural Resources Agency (GNRA)

The Guyana Natural Resources Agency, which supervises the Guyana Forestry Commission and the Guyana Geology & Mines Commission is the co-ordinating agency for this Project. Its responsibilities in the Project Area include:

... Implementation of the relevant segments of the National Forestry Action Plan (NFAP),

... The provision of expertise and information on commercial forestry utilisation through the Guyana Forestry Commission,

... The provision of advice on reforestation, and

... The provision of expertise and information on mining activities through the Guyana Geology and Mines Commission.

vii) Hydrometeorological Services

... The Hydrometeorological Service is responsible for monitoring and evaluating the climate and water resources of Guyana and providing relevant data to aeronautical, water, agricultural, engineering and other agencies with activities sensitive to climate-water phenomena.

... In addition to the above agencies, collaboration with the Ministry of Culture in Anthropology will be valuable.

... Collaboration will need to be established from the beginning with other bilateral and international programmes in the areas of research and training.

... The TROPENBOS Project, whose objective is to conserve and develop tropical rain forests and the CIDA supported programmes in forestry will be of immense help to this Project.

2. Collaboration with Institutions in the Amazon Basin

Guyana is an active participant in the work of the Amazonian co-operation countries, covering the areas of environment, natural resources, health, scientific research, navigation, transportation, communication, trade, tourism, ethnological and archaeological resources. The countries participating in this treaty are: Bolivia, Brazil, Colombia, Ecuador, Guyana, Peru, Suriname and Venezuela. Mutually beneficial linkages can be developed between the International Centre and appropriate national institutions in these countries.

3. Collaboration with Institutions in the Commonwealth Countries

Commonwealth countries have unique capability in the areas of crucial concern to the International Centre. Therefore, strong ties should be established with appropriate institutions in Commonwealth countries such as India, Malaysia, Pakistan, Bangladesh, Nigeria, Ghana, Zimbabwe, Trinidad & Tobago, Belize, United Kingdom, Australian, New Zealand and Canada. During the formative stages of the International Centre, Commonwealth institutions should be requested to depute appropriate scientists and technologists on secondment, for two to three years to the International Centre. They can also play an active role in training.

4. Collaboration with Institutions in Non-Commonwealth Countries

Guyanese institutions are already collaborating with institutions in the United States, Netherlands and other Non-Commonwealth Countries. The International Centre should establish appropriate linkages with relevant institutions in all countries.

5. Collaboration with Private and Public Sector Industry

A major thrust of the International Centre will be in the sustainable utilisation of tropical rain forests. Collaboration with industry, whether public or private, in areas relating to timber trade, mining and other commercial activities will be very valuable.

From the foregoing, it will be clear that the strength of the International Centre will lie in providing leadership in partnership. The Centre should function "without walls" and should work actively with such institutions in Guyana, the Commonwealth and elsewhere, which are working in areas relevant to the Centre's mandate. In this way, the Centre can become the hub of a network of institutions around the world engaged in promoting the sustainable management of tropical rain forests.

VIII Location of the Centre and its Distinctive Features

The Commonwealth Sustainable Tropical Forestry Programme and the associated International Centre for Research, Training and Communication will be unique initiatives in the history of Tropical rain forest management and improvement. The Project Site where the research and developmental activities will be carried out is large, about 360,000 ha. It is a spade shaped site located in the waist of Guyana. (The central point is 4°30'N Lat.; 58°50'W Longtd.).

The area is bounded to the North by Siparuni and Takutu Rivers, to the East by the Essequibo River and the South is defined by the foothills of the Iwokrama Mountains (Map 1). While most of the area is flat, 60 - 100 m above sea level, the Levai hills rise up to 325 m and the Iwokrama Mountains to 800 m above sea level.

A rectangular pattern of drainage by a series of rivers leads into the main Essequibo River, which then discharges into the Atlantic Ocean. The soils are generally deep, and range from lateritic to sands and clays. Minerals like gold, diamonds, quartz crystals, potarite and some others are known to occur. The climate falls between the wettest and driest climate zones in Guyana (annual rainfall 24 - 64 cm; annual maximum temperature range: 23° - 29°C; daily temperature range up to 10°C in some areas).

The vegetation of the site is practically untouched. It is covered by almost all forest types that occur in general to the West of the Demerara River. The vegetation ranges from close-canopied high forests to savannas: Mixed Forests on steep hills and flat terrain, Mora Forest, Scrub and Wetland Savannas, and Low Open Swamps. The first two are rich in commercial timber. Riparian vegetation is also well developed in the site.

The site is rich in fauna as well. For example, 48 out of 83 Guyanese mammals are found here. The avian, reptilian and other fauna are richly represented too. In general, the site represents a good cross-section of the fauna of Guyana.

The site will be broadly grouped into two sectors: one will form the pristine Wilderness Preserve, and the other for sustainable utilisation. The former cattle trail, which is being upgraded into a road, divides the two sectors. The portion to the south of the trail, of about 160,000 ha, will form the pristine area. This area includes all the representative vegetation types. This, and the fact that the mountainous sites are located here provide a great diversity of habitats for both flora and fauna. Arapaima, the largest fresh water fish, occurs near this area. The pristine area is also known to support several endangered species like the black caiman, primates and members of the cat family. Included in

this sector are big segments of forests rich in timber and other products. Some of the major tree species occurring in this area are given in Volume II.

To the north of the trail is some 160,000 ha, a large portion being productive forest. This will be devoted to development and management of forests for sustained yield. Another 40,000 ha, rich in minerals will form the mining sector in the development sector.

Overall, the Project Site has the following distinctive characteristics:

... It straddles both the coastal (Caribbean) and continental (Amazonian) domains,

... Has pristine status for baseline studies,

... Has rich biological and cultural diversity,

... Both ancient and modern tropical forest usage are known,

... Permits a holistic project design,

... Enables national and international linkages,

... Provides opportunities for conservation and sustainable development, and

... Enables innovative and state of the art developments in forestry and mining.

For implementing the mandate of the Centre in research, training and communication, it is clear that the main campus of the Centre will best be located in Georgetown, perhaps in an

area adjoining the University of Guyana and the Institute of Applied Science and Technology. The Centre will however need several field research and training centres with associated dormitories at different locations in the project site, for undertaking field experiments and studies. The computer centre, remote sensing laboratory and other sophisticated facilities are best located at the main campus in Georgetown. Communication with the different field centres will be possible only with help of an aircraft or helicopter and provision will have to be made in the budget for facilitating communication between the main and field centres.

IX Governance and Organisational Structure

A unique programme of this kind can be implemented only if there are innovative governance and organisational structures. A mismatch between the form of governance and the functions of the Centre will make it impossible to implement such a visionary project.

Therefore, the following governance structures and legal arrangements are suggested:

A. Implementation Committee

The Commonwealth Secretary-General and the Government of Guyana should jointly set up as soon as possible an Implementation Committee which can take follow-up action recommended in this report. The Implementation Committee, serviced by a full-time Officer on Special Duty (OSD), should initiate the necessary legal, administrative and fund raising measures essential for starting the Project. In addition to the OSD appointed by the Commonwealth Secretary-General, the Government of

Guyana should designate a Senior Officer to work full-time as the Counterpart Officer. The Committee should have expertise in the areas of organisation of international centres (such as the Centres of the Consultative Group on International Agricultural Research - CGIAR) and of administrative, legal and financial matters.

B. Headquarters Agreement

The Implementation Committee should draw up the necessary legal instruments for conferring an international, non-profit and autonomous status to the Centre through an Act of Parliament. Appropriate provisions of the UN Privileges and Immunities Act should be incorporated in the Act.

The legal instrument to establish the Project and provide for its continuity should include:

a) Provisions for the use, control, safeguarding and protection of the Project Area.

b) Provisions for cost accounting, funds and resources utilisation for the area set aside for commercial exploitation based on ecological ground rules.

C. Consortia of Donors and of Professional Institutions

The major constraints in relation to the implementation of this Project which need consideration from the beginning are:

a) Lack of infrastructure and communication facilities; and

b) Serious paucity of professional scientists and technical personnel.

Considerable financial and technical support will be essential to overcome these constraints.

It is suggested that two consortia be organised by the Commonwealth Secretariat for supporting the financial and professional needs of the Programme and the Centre. These are:

a) Consortium of Donors: consisting of representatives of bilateral and multilateral agencies and Foundations interested in supporting the core and co-operative activities of the Centre; and

b) Consortium of Academies: Universities, Forestry and Mining Research Institutions interested in entering into professional partnership with this Centre.

Such a consortium of professional institutions is extremely important for giving a start to the work of the Centre as soon as possible.

D. Board of Trustees

The Programme and the Centre should function under an independent Board of Trustees, chaired by an eminent, internationally respected person. The number of trustees may be fifteen, including three

ex-officio trustees nominated by the Government of Guyana. The Director-General of the Programme will also be an ex-officio trustee. The other eleven trustees should be selected on the basis of criteria such as professional expertise, gender and geographical representation, industrial expertise, fund raising capability and expertise in environmental economics and communication.

As soon as the requisite funds are available and the legal instruments are completed, the Board of Trustees should be constituted.

The Board of Trustees can establish an Executive Committee, Programme Committee and a Finance and Audit Committee to assist it in its work. If necessary, a Human Resources Committee of the Board can be established in the initial stages, since the first priority will be the training and recruitment of the requisite personnel for implementing the research and training programmes. The proposed organisation structure is indicated in Figure 1.

E. Search Committee

A priority task of the Board will be the setting up of a Search Committee to identify the first Director-General.

The critical role of the Director-General in ensuring the successful implementation of this project cannot be over-emphasised. The person selected should have a combination of professional and human qualities and management expertise, which will inspire the confidence of the donor community.

F. Staffing Pattern and Personnel Policies

As soon as the Director-General is appointed he or she and the Board should develop an appropriate pattern of staffing based on programme priorities and personnel policies appropriate for attracting and retaining good professional and supporting staff.

In the formative stages, advantage can be taken of the expertise of Guyanese professionals living abroad through UNDP's TOKTEN Scheme. Also, the U.N. Volunteers Scheme could provide trained personnel to work in this Centre.

G. Finalisation of Project Details

The precise scientific strategies and research and training priorities for each of the major core and co-operative programmes will have to be developed by a group of eminent specialists invited to attend Project Design Workshops. The Project Design Workshops can be convened as soon as the Director-General and the Project Leaders are in position. Scientists, drawn from the consortium of Academic and Professional Institutions, who are likely to be seconded to the International Centre, should be invited to participate in such Project Design Workshops.

H. Time Schedule

This Project is to be formally announced on June 5th, 1990, Environment Day, in Georgetown by His Excellency the President of Guyana and in London by the Secretary-General of the Commonwealth. It

is suggested that the follow-up action should be so organised that the Project can be formally inaugurated on June 5th, 1991, so that a detailed presentation of this unique Project, designed to save the Amazonian Rain Forests for the future, can be made at the UN Conference on Environment and Development in Brazil on June 5th, 1992. This will involve the following:

(1) Commonwealth Secretariat and Government of Guyana to designate Officers on Special Duty,

(2) Presentation of the Project Mission Report to potential donors and assessment of potential support,

(3) Constitution of the Project Implementation Team,

(4) Finalisation of the legal provisions needed for giving this Programme and International Centre a legal personality and the necessary priveleges and immunities,

(5) Establishment of a Board of Trustees,

(6) Constitution of a Search Committee for the position of Director-General,

(7) Appointment of Director-General by June 5, 1991,

(8) Selection of Project Leaders,

(9) Holding of Project Design Workships,

(10) Formal inauguration of the Programme on June 5, 1991.

I. Financial Requirements

In the time available, it has not been possible to make detailed calculations of the likely requirements of funds. Considering the multi-faceted dimensions and uniqueness of this project and its significance for the future of tropical rain forests, it would be appropriate if the financial targets suggested below are kept in view.

Phase I: 1990 - 1991

About US$200,000 for all initial expenses including the expenses of the Implementation Committee, meetings of the Board of Trustees and of the Director-General Search Committee.*

Phase II: 1991 - 1996: (5 year Programme of Work and Budget)

a) Capital Expenditure

For constructing and equipping the main Campus and Field Laboratories and Dormitories - US$20,000,000 (twenty million US dollars).

b) Core and Co-operative Research and Training Activities

US$25,000,000 (twenty-five million US dollars).

This will require an annual operating budget of about US$3,000,000 in the first year and reaching about US$7,000,000 by 1996.

Total - US$45,000,000 (forty-five million US dollars).

/...

Operational details for managing the budget on the Project area set aside for work on sustainable utilisation will have to be drawn up separately.

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* The group was informed by the Chairman of Local Inter-Agency Committee that "It is estimated that about US$200,000 will be required (1990 - US$100,000 and 1991 - US$100,000) for the activities necessary for the assembly of the additional basic data for the Project Area."

APPENDIX I

GUYANA INTERAGENCY COMMITTEE: MEMBERS

. Cde Winston M. King - (Coordinator/Chairman)
Executive Chairman, GNRA

. Dr. Walter Chin
Executive Chairman, GAHET

. Dr. Ulric T'D. Trotz
Director, IAST

. Dr. Tyrone Ferguson
Director-General
Ministry of Foreign Affairs

. Ms. Monica Van Sertima
State Counsel
Attorney General's Chambers

. Dr. Karen Pilgrim
Asst. Chief Crops & Lifestock Officer, Wildlife
Ministry of Agriculture

. Dr. George Walcott
Vice-Chancellor
University of Guyana

APPENDIX II

GUYANESE COUNTERPART TECHNICAL TEAM

	TEAM MEMBER	EXPECTED INPUTS	DESIGNATION
1.	Cde. Winston M.King	Co-ordinator/Chairman	Executive Chairman, GNRA
2.	Dr. Walter Chin	Environmental Programme	Executive Chairman, GNRA
3.	Dr. Ulric O. D. Trotz	Research Programme	Director, ISAT
4.	Dr. George Walcott	Research Programme	Vice Chancellor, U.G
5.	Dr. Michael Granger	Research Programme	Director, NARI
6.	Dr. Karen Pilgrim	Wild Life Programme	Asst. Chief Crops and Livestock Officer, Wildlife Ministry of Agriculture.
7.	Cde. Chander Persuade	Hydrometerological Programme	Chief Hydrometerologial Officer, Ministry of Communications and Works.
8.	Cde. Joseph Holder	Lethem-Mabura Road	Technical Consultant to the Minister of Communications and Works.
9.	Cde. Allan N. Archer	Surveyors Programme	Commissioner, Lands and Surveys Division, Ministry of Agriculture.
10.	Dr. Tyrone Ferguson	Foreign Policy Programme	Director General, Ministry of Foreign Affairs.
11.	Ms. Monica Van Sertima	Legal Aspects	State Counsel, Attorney General's Chambers
12.	Cde. Balkaran Udit	Forestry Programme	Commissioner (Ag.), Guyana Forestry Commission.
13.	Cde. Cecil O. Baird	Forestry Programme	Specialist Adviser, GNRA
14.	Cde. John Douglas	Forestry Programme	Operations Director, Demerar Woods Ltd.
15.	Cde William Woolford	Mining Programme	Commissioner (Ag.), Geologly and Miners Commission.
16.	Dr. Dennis Williams	Social Anthropology Programme	Director of Anthropology, Walter Roth Museum.
17.	Cde. E. Lance Carberry	Secretary	Head, Natural Resources Planning Unit, GNRA.

/...

APPENDIX III

COMMONWEALTH EXPERT GROUP: MEMBERS

1. Dr. Monkombu S. Swaminatham - Chairman
   President
   International Union for Conservation
   of Nature and Natural Resources
   Hon. Director
   Centre for Research on Sustainable
   Agricultural & Rural Development
   Madras
   INDIA.

2. Dr. Simmathiri Appanah
   Senior Research Officer
   Natural Forest Ecology & Silviculture
   Forest Research Institute
   Kaula Lumpur
   MALAYSIA.

3. Dr. Bal S. Ramdial
   Dean
   Research and Development
   National Institute of Higher Education
   (Research, Science and Technology)
   Port-of-Spain
   TRINIDAD & TOBAGO.

4. Dr. George S. Nagle
   President & Resource Economist
   Nawitka
   British Columbia
   CANADA

5. Dr. Conrad Gorinksy
   Chairman
   Biofactors Limited
   London
   United Kingdom

6. Dr. Promila Kapoor - Secretary
   Commonwealth Science Council
   Commonwealth Secretariat
   Marlborough House
   Pall Mall
   London SW1Y 5HX
   United Kingdom

/...

APPENDIX IV

COMMONWEALTH EXPERT GROUP: ADVANCE PARTY

. Dr. Bal S. Ramdial
Dean
Research and Development
National Institute of Higher Education
(Research, Science and Technology)
Port-of-Spain
Trinidad

. Dr. T. Whitmore
Department of Geology
Downing Place
Cambridge
United Kingdom

. Dr. Mark Collins *
Head, Habitats Data Unit
World Conservation Monitoring Centre
Cambridge
United Kingdom

. Dr. Promila Kapoor - Secretary
Commonwealth Science Council
Commonwealth Secretariat
Marlborough House
Pall Mall
London SW1Y 5HX
United Kingdom

*Specially invited.

COMMONWEALTH - GOVERNMENT OF GUYANA

PROGRAMME FOR SUSTAINABLE TROPICAL FORESTRY

SITE DESCRIPTION REPORT

Map 1

PROJECT SITE

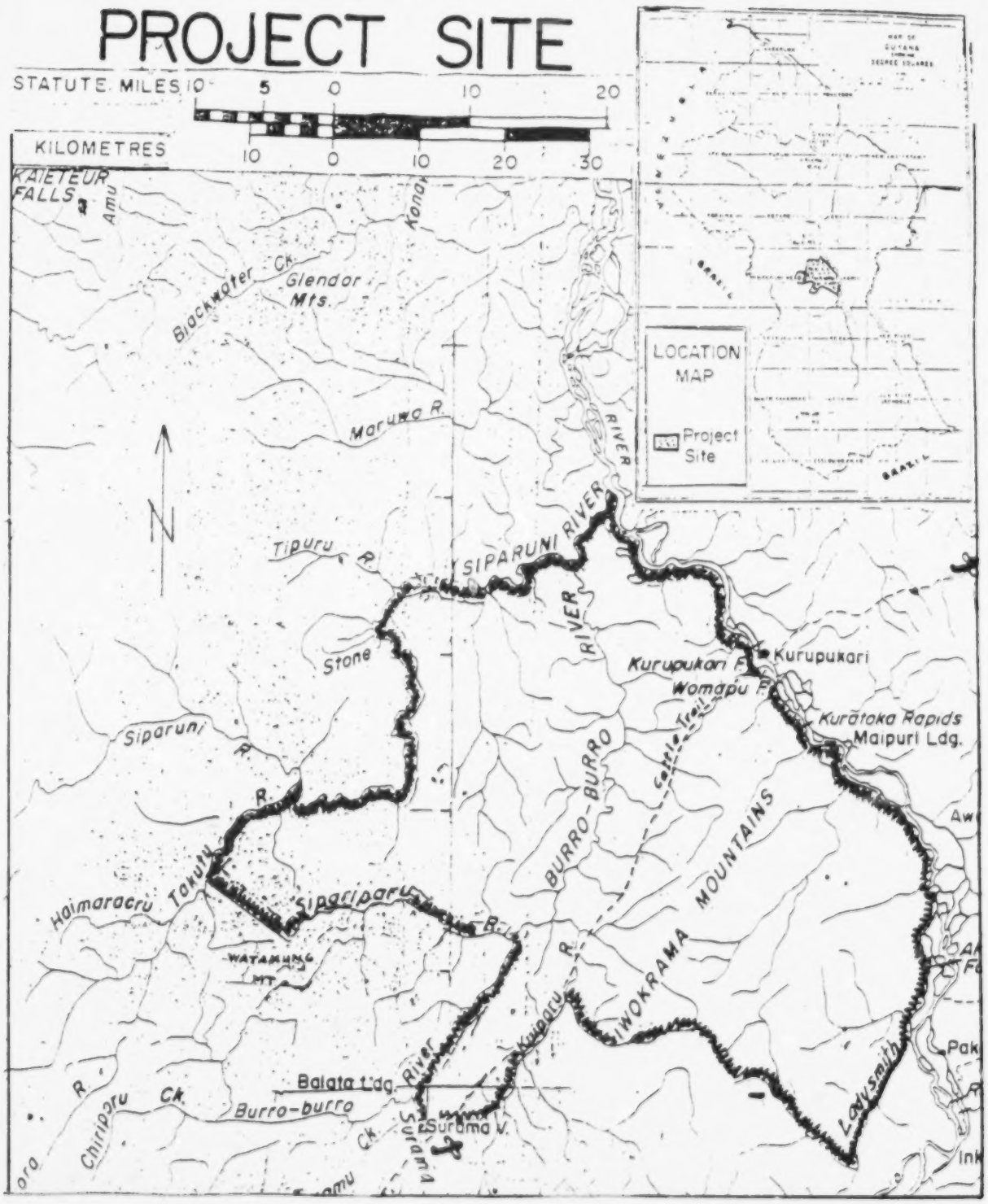
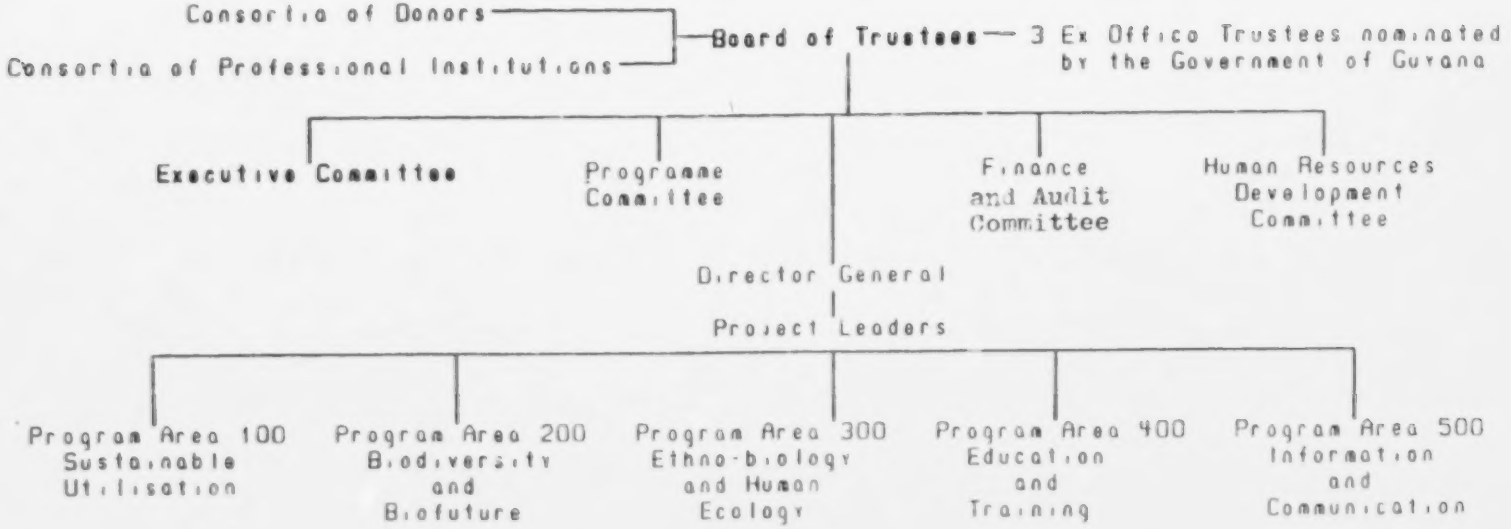


FIGURE 1

COMMONWEALTH - GOVERNMENT OF GUYANA

Programme For Sustainable Tropical Forestry: International Institute For Sustainable Tropical Forestry: Organisation/Structure


Consortia of Donors
Consortia of Professional Institutions
Board of Trustees
3 Ex Officio Trustees nominated by the Government of Guyana
Executive Committee
Programme Committee
Finance and Audit Committee
Human Resources Development Committee
Director General
Project Leaders
Program Area 100 Sustainable Utilisation
Program Area 200 Biodiversity and Biofuture
Program Area 300 Ethno-biology and Human Ecology
Program Area 400 Education and Training
Program Area 500 Information and Communication

UNITED
NATIONS

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General Assembly Security Council

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16 July 1990

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GENERAL ASSEMBLY
Forty-fifth session
Items 29, 71 and 144 of the
preliminary list*
THE SITUATION IN AFGHANISTAN AND
ITS IMPLICATIONS FOR INTERNATIONAL
PEACE AND SECURITY
REVIEW OF THE IMPLEMENTATION OF THE
DECLARATION ON THE STRENGTHENING
OF INTERNATIONAL SECURITY
PEACEFUL SETTLEMENT OF DISPUTES
BETWEEN STATES

SECURITY COUNCIL
Forty-fifth year

Letter dated 13 July 1990 from the Chargé d'affaires a.i. of the Permanent Mission of Pakistan to the United Nations addressed to the Secretary-General

Further to our letter dated 15 January 1990 (A/45/79-S/21080), I have the honour to report to you the following two incidents of violation of Pakistan territory from the Afghanistan side, which occured on 14 and 26 June 1990:

"On 14 June 1990, at 0200 hours, the Kabul régime forces fired one SCUD missile, which landed in the area of Teri Mangal in the Kurram Agency. As a result, one Afghan refugee was injured.

"On 26 June 1990, at 1615 hours, the Kabul régime forces fired one SCUD missile, which landed in the area of Peiwar Kotal in the Kurram Agency. As a result, four Afghan refugees were injured."

The Afghan Chargé d'affaires was summoned to the Foreign Office on the morning of 1 July 1990 and a strong protest was lodged with him, asking the Kabul régime to stop such attacks immediately.

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* A/45/50.

The Afghan Chargé d'affaires was also told about the rejection by the Government of Pakistan of the protests made by the Kabul régime, in which it was stated that on 6, 24 and 27 June 1990, Pakistani aircraft had violated Afghan territory. The allegations had been investigated and found to be baseless. The Kabul régime was advised to refrain from attempts to malign Pakistan by its propaganda campaign.

I request you to have this letter circulated as a document of the General Assembly, under items 29, 71 and 144 of the preliminary list, and of the Security Council.

(Signed) Arif AYUB
Acting Permanent Representative